

I claim:

1 1. A surgical apparatus, comprising:
2 a carrier movable between an unstressed state and a stressed
3 state;
4 a tissue stimulation element supported on the carrier; and
5 a tissue engagement device associated with the carrier and
6 configured to secure the carrier to tissue in the stressed state.

1 2. A surgical apparatus as claimed in claim 1, wherein the carrier is
2 configured to press the tissue stimulation element against the tissue when in
3 the stressed state.

1 3. A surgical apparatus as claimed in claim 1, wherein the carrier
2 includes first and second end portions and an interior portion and the carrier is
3 configured such that the interior portion will be in spaced relation to the tissue
4 when the end portions are in contact with the tissue and the carrier is in the
5 unstressed state.

1 4. A surgical apparatus as claimed in claim 3, wherein the carrier
2 interior portion is curved.

1 5. A surgical apparatus as claimed in claim 3, wherein the tissue
2 stimulation element comprises first and second tissue stimulation elements
3 carried on the first and second end portions.

1 6. A surgical apparatus as claimed in claim 5, wherein the carrier is
2 configured to press the first and second tissue stimulation element against the
3 tissue when in the stressed state.

1 7. A surgical apparatus as claimed in claim 3, wherein the tissue
2 engagement device is configured to hold the interior portion of the carrier
3 substantially against the tissue.

1 8. A surgical apparatus as claimed in claim 1, wherein the tissue
2 engagement device comprises first and second tissue piercing members.

1 9. A surgical apparatus as claimed in claim 1, wherein the tissue
2 engagement device comprises a helical tissue piercing member.

1 10. A surgical apparatus as claimed in claim 1, wherein the tissue
2 engagement device comprises adhesive.

1 11. A surgical apparatus as claimed in claim 1, wherein the tissue
2 stimulation element comprises a stimulation electrode.

1 12. A surgical apparatus as claimed in claim 1, wherein the tissue
2 stimulation element comprises a pair of stimulation electrodes.

1 13. A surgical apparatus for use with tissue, comprising:
2 a tissue stimulation element; and
3 means, associated with the tissue stimulation element, for
4 securing the surgical apparatus to the tissue and pressing the stimulation
5 element against the tissue.

1 14. A surgical apparatus as claimed in claim 14, wherein the tissue
2 stimulation element comprises a stimulation electrode.

1 15. A surgical apparatus as claimed in claim 14, wherein the tissue
2 stimulation element comprises a pair of stimulation electrodes.

1 16. A surgical apparatus for use with tissue, comprising:
2 a tissue stimulation element; and
3 an anchor, associated with the tissue stimulation element,
4 configured to secure the surgical apparatus to the tissue and press the
5 stimulation element against the tissue.

1 17. A surgical apparatus as claimed in claim 16, wherein the tissue
2 stimulation element comprises a stimulation electrode.

1 18. A surgical apparatus as claimed in claim 16, wherein the tissue
2 stimulation element comprises a pair of stimulation electrodes.

1 19. A surgical apparatus as claimed in claim 16, wherein the anchor
2 includes a flexible carrier.

1 20. A surgical apparatus as claimed in claim 19, the flexible carrier
2 is non-linear when in a relaxed state.

1 21. A surgical apparatus as claimed in claim 19, wherein the anchor
2 includes a tissue piercing device associated with the flexible carrier.

1 22. A surgical apparatus as claimed in claim 19, wherein the anchor
2 includes adhesive associated with the flexible carrier.

1 23. A surgical method, comprising the steps of:
2 securing a self-anchoring stimulation and sensing device to
3 tissue such that a tissue stimulation element is biased against the tissue; and
4 performing one of a stimulation procedure and a sensing
5 procedure with the tissue stimulation element.

1 24. A surgical method as claimed in claim 23, wherein the step of
2 securing a self-anchoring stimulation and sensing device comprises securing
3 a self-anchoring stimulation and sensing device to myocardial tissue such that
4 a tissue stimulation element is biased against the myocardial tissue.

1 25. A surgical method as claimed in claim 23, wherein the step of
2 securing a self-anchoring stimulation and sensing device comprises securing
3 a self-anchoring stimulation and sensing device to myocardial tissue such that
4 a tissue stimulation element is biased against the myocardial tissue on one
5 side of a lesion.

1 26. A surgical method as claimed in claim 25, further comprising the
2 step of:
3 monitoring myocardial tissue on the other side of the lesion.

1 27. A surgical method as claimed in claim 25, wherein the self-
2 anchoring stimulation and sensing device defines a first self-anchoring
3 stimulation and sensing device, the method further comprising the steps of:
4 securing a second self-anchoring stimulation and sensing device
5 to tissue such that a tissue stimulation element is biased against myocardial
6 tissue on the other side of the lesion; and
7 monitoring the myocardial tissue on the other side of the lesion
8 with the second self-anchoring stimulation and sensing device.

1 28. A surgical system for use with tissue, comprising:
2 a source of stimulation energy; and
3 an apparatus, operably connected to the source of stimulation
4 energy, including
5 a tissue stimulation element, and
6 an anchor, associated with the tissue stimulation element,
7 configured to secure the surgical apparatus to the tissue and press the
8 stimulation element against the tissue.

1 29. A surgical system as claimed in claim 28, wherein the tissue
2 stimulation element comprises a stimulation electrode.

1 30. A surgical system as claimed in claim 28, wherein the tissue
2 stimulation element comprises a pair of stimulation electrodes.